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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,970	03/19/2001	Thomas Zermani	MCA-508 US	9265

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MILLIPORE CORPORATION
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9
EXAMINER

OCAMPO, MARIANNE S

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,970

Applicant(s)

ZERMANI ET AL.

Examiner

Marianne S. Ocampo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 10-12, 16 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-12, 16, 24 and 26 is/are rejected.
- 7) ☒ Claim(s) 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the filtration device having multiple pieces of filter sequentially arranged in the well and sealed to the well by a skive formed between each layer (i.e. piece) of filter, as in claim 25 must be shown or the feature should be canceled from the claim. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. Color photographs and color drawings are acceptable only for examination purposes unless a petition filed under 37 CFR 1.84(a)(2) is granted permitting their use as acceptable drawings. In the event that applicant wishes to use the drawings currently on file as acceptable drawings, a petition must be filed for acceptance of the color photographs or color drawings as acceptable drawings. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), **three sets of color drawings or color photographs**, as appropriate, a **black and white photocopy that accurately depicts to the extent possible the subject matter shown**

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in the color drawings, and an amendment to the first paragraph of the brief description of the drawings section of the specification which states:

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the U.S. Patent and Trademark Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings have been satisfied. See also M.P.E.P section 608.02 (2).

3. Concerning the petition filed under 37 CFR 1.84 (b) (2) to accept color photographs of Figures 6 – 8 filed on 3-19-01 (as part of the application papers) and once again with the Formal Drawings on 2-10-03, has not been accepted for failing to meet all the requirements as stated in the statute above. The highlighted portion above are required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zermani (WO 00/66268) in view of DeSalvo (US 5,284,586).

6. Concerning claim 1, Zermani discloses a filtration device (1) comprising at least one well (2), each well (2) having an open top (bounded by planar portion 3) and a closed bottom (5) having one or more holes (6) which allow liquid to pass through, at least one piece of filter (8, 27) positioned within each well (3) and against the bottom (5) of each well (2) and a mechanical interlock against a top of the filter (8, 27) and the well (2) being formed of plastic (thermoplastic) and the interlock (such as 30) being a portion of the well (i.e. those portions surrounding the sealing surface of the filter, which would be along and adjacent to the outer peripheries of the filter 8) which could be formed continuously from at least a portion of an inner wall of the well and the interlock remaining attached to and as a portion of the inner wall, the portion of the well being thermally bonded to the sealing surface of the filter (8), as in pages 1 – 9 and figure 6. Zermani fails to disclose the interlock being one or more skives (“skives” being defined as *portions of the inner wall of the well that have been skived and rolled along the wall until it reaches the location of the filter to lock it in the well, and excluding thermal bonding and gluing techniques or use of expensive welding equipment such as ultrasonic welders*, according to applicant’s definition given by the response (Paper no. 7) in pages 5 – 6). Claim 1 is considered a product by process claim. The patentability of a product by process claim is based upon the product itself, eventhough the claim is limited and defined by process (in this instance, how the interlock is being formed or made, i.e. as a “skive” as defined by the applicants’ response found

in Paper no. 7, pages 5 – 6), and therefore, the product in such a claim is unpatentable if it is the same as, or obvious from the product of the prior art, even if the product of the prior art had been made by a different process. See In re Thorpe, et al., No. 85-1913 (11-21-85) 227 USPQ pages 964 – 966. In this instance, the interlock formed by thermal bonding or gluing techniques taught by the prior art Zermani, performs the same exact function of a “skive”, that is to retain or lock the filter (8, 27) in place within the well (2) and against the bottom (5) thereof. Although Zermani does not teach the punching and forming of a skive from a portion of the inner wall of the well to form the interlock which would keep the filter (8) in the well against the bottom (5) thereof, it is considered that the claimed invention (i.e. a filtration device having at least one well and at least one piece of filter positioned therein and a mechanical interlock against a top of the filter and the well being formed of plastic) is the same as, or obvious from the product of the prior art (Zermani), even if the product of the prior art (Zermani) had been made by a different process. It is well known in the art of forming a filtration device the method of forming a mechanical interlock as claimed by the applicants in claim 1 (i.e. forming a *skive (by means of a punching pin driving against a cavity/bore of a well such that it rolls or cuts a portion of the wall of the cavity and pushes that portion downwards to form a mechanical interlock)* to lock a filter in a well (i.e. depression or a container or vessel which could also any cup-shaped cavity/vessel having at least one opening at a bottom portion thereof) or a skive type of interlock being claimed by the applicants, as taught by De Salvo (US 5,284,586). DeSalvo teaches a mechanical interlock in the form of at least one skive (annular ring 26 formed from having a punching pin driving through a bore of a well 12 and rolling a portion of the inner wall of the bore downwards

to lock a filter (20) in the well (12) which locks a filter (20) in a well (12) having an open top and a closed bottom having at least one hole/opening covered by the filter (20), as in fig. 4 and in cols. 2 – 4 and in claims 1 – 4. It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the interlock of the filtration device of Zermani, by adding the embodiment taught by DeSalvo, in order to provide an improved interlock which is effective in locking the filter in the well as well as simple and costs less to manufacture (see col. 2, lines 64 – 68 of DeSalvo), compared to that of Zermani.

7. Regarding claim 5, in this claim, the limitation “the vertical center line” lacks proper antecedent basis. Zermani further discloses at least a portion of the inner wall being tapered outwardly as it progress from the top of the well toward the bottom of the well and the taper is from about 0 degrees toward a vertical center line of the well to about –20 degrees toward the vertical center line of the well, as in fig. 6.

8. With regards to claim 6, in this claim, the limitation “the vertical center line” lacks proper antecedent basis. Although Zermani does not explicitly disclose the exact angle of the tapering outwardly of the at least a portion of the inner wall being about –7 degrees towards a vertical center line of the well, it is considered obvious to one of ordinary skill in the art at the time of the invention, to modify the tapering outwardly of the at least a portion of the inner wall of the well to any desired value, in particular about –7 degrees, as a matter of choice of the user, as well as depending upon the shape (i.e. degree of tapering of the sides) of the filter being

placed in the well. If the filter has sides which taper outwardly to about -7 degrees, then to form the at least a portion of the inner wall to that specific degree of taper would be obvious in order to properly seat the filter in place in the well.

9. Concerning claim 10, Zermani further discloses the one or more pieces of filter (8, 27) being made from a polymeric material, as in page 7.

10. With respect to claim 11, Zermani also discloses the one or more pieces of filter (8, 27) being made from a polymeric material selected from the following group of material consisting of nitrocellulose, cellulose acetate, polysulphones, polyethersulphones, polyarylsulphones, polyvinylidene fluoride, polyolefins, polyamides, PTFE, thermoplastic fluorinated polymers and polycarbonates, as in page 7, lines 5 – 14.

11. With respect to claim 12, Zermani discloses the device (i.e. the well plate 1) being made of a material selected from the following group of materials consisting of polyolefins, polycarbonates, nylons, PTFE resins, ABS, acrylic and methacrylic resins and copolymers of acrylic and methacrylic resins, as in page 6, lines 23 - 31.

12. Regarding claim 13, Zermani also discloses the at least one piece of filter (8, 27) being multiple (more than one) pieces of filter, as in page 6, lines 17 – 18. It is also considered upon combination of the teachings of Zermani and DeSalvo, the interlock formed as a skive,

would have to be on top of the upper surface of the uppermost filter. The same motivation applied in claim 1 (see paragraph 3 above) is being applied here. Furthermore, the case law, *In re Harza* [274 F.2d, 124 USPQ 378 (CCPA 1960)] in which a mere duplication of parts (in this instance, duplication of the filter from one piece to more than one/multiple pieces) for a multiplied effect does not carry any patentable weight or significance unless a new or unexpected result is produced. See also M.P.E.P. section 2144.04 part VI paragraph B. It is considered obvious to one of ordinary skill in the art having more than one piece of filter in the well would provide a greater filtration surface area, and thereby increase dirt (i.e. any unwanted particulates from the fluid) capacity of the device, and have a longer lifespan than those with only one piece of filter in each well of the device.

13. With regards to claim 16, Zermani also discloses the device (1) having a number of wells (2) selected from the group consisting of 96, 384 and 1536, as in page 7, lines 29 – 32.

14. Regarding claim 26, Zermani discloses a filtration device (1, a multiwell plate) comprising 96 wells (2) (as in page 7), and each well (2) having an open top (bounded by planar portion 3) and a closed bottom (5) having one or more holes (6) which allow liquid to pass through, at least one piece of filter (8, 27) positioned within each well (3) and against the bottom (5) of each well (2) and a mechanical interlock against a top of the filter (8, 27) and the well (2) being formed of plastic (thermoplastic) and the interlock (such as 30) being a portion of the well (i.e. those portions surrounding the sealing surface of the filter, which would be along and

adjacent to the outer peripheries of the filter 8) which could be formed continuously from at least a portion of an inner wall of the well and the interlock remaining attached to and as a portion of the inner wall, the portion of the well being thermally bonded to the sealing surface of the filter (8), as in pages 1 – 9 and figure 6. Zermani fails to disclose the interlock being one or more skives (“skives” being defined as *portions of the inner wall of the well that have been skived and rolled along the wall until it reaches the location of the filter to lock it in the well, and excluding thermal bonding and gluing techniques or use of expensive welding equipment such as ultrasonic welders*, according to applicant’s definition given by the response (Paper no. 7) in pages 5 – 6).

Claim 1 is considered a product by process claim. The patentability of a product by process claim is based upon the product itself, eventhough the claim is limited and defined by process (in this instance, how the interlock is being formed or made, i.e. as a “skive” as defined by the applicants’ response found in Paper no. 7, pages 5 – 6), and therefore, the product in such a claim is unpatentable if it is the same as, or obvious from the product of the prior art, even if the product of the prior art had been made by a different process. See *In re Thorpe, et al.*, No. 85-1913 (11-21-85) 227 USPQ pages 964 – 966. In this instance, the interlock formed by thermal bonding or gluing techniques taught by the prior art Zermani, performs the same exact function of a “skive”, that is to retain or lock the filter (8, 27) in place within the well (2) and against the bottom (5) thereof. Although Zermani does not teach the punching and forming of a skive from a portion of the inner wall of the well to form the interlock which would keep the filter (8) in the well against the bottom (5) thereof, it is considered that the claimed invention (i.e. a filtration device having at least one well and at least one piece of filter positioned therein and a

mechanical interlock against a top of the filter and the well being formed of plastic) is the same as, or obvious from the product of the prior art (Zermani), even if the product of the prior art (Zermani) had been made by a different process. It is well known in the art of forming a filtration device the method of forming a mechanical interlock as claimed by the applicants in claim 1 (i.e. forming a *skive (by means of a punching pin driving against a cavity/bore of a well such that it rolls or cuts a portion of the wall of the cavity and pushes that portion downwards to form a mechanical interlock)* to lock a filter in a well (i.e. depression or a container or vessel which could also any cup-shaped cavity/vessel having at least one opening at a bottom portion thereof) or a skive type of interlock being claimed by the applicants, as taught by De Salvo (US 5,284,586). DeSalvo teaches a mechanical interlock in the form of at least one skive (annular ring 26 formed from having a punching pin driving through a bore of a well 12 and rolling a portion of the inner wall of the bore downwards to lock a filter (20) in the well 12) which locks a filter (20) in a well (12) having an open top and a closed bottom having at least one hole/opening covered by the filter (20), as in fig. 4 and in cols. 2 – 4 and in claims 1 – 4. It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the interlock of the filtration device of Zermani, by adding the embodiment taught by DeSalvo, in order to provide an improved interlock which is effective in locking the filter in the well as well as simple and costs less to manufacture (see col. 2, lines 64 – 68 of DeSalvo), compared to that of Zermani.

15. Claims 2 – 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zermani and DeSalvo, as applied to claim 1 above, and further in view of Cohen et al. (US 3,730,352).

16. Concerning claims 2 – 4, in these claims, the limitation “the vertical center line” lacks proper antecedent basis. Zermani as modified by DeSalvo, fail to teach at least a portion of the inner wall being tapered inwardly as it progresses from the top of the well toward the bottom of the well (claim 2), wherein the taper is from about 0 degrees toward a vertical center line of the well to about 20 degrees towards the vertical center line (claim 3), or the taper is about 7 degrees toward the vertical center line of the well (claim 4). Cohen et al. teach a filtration device (14) (i.e. multiwell plate) similar to that of Zermani, comprising at least one well (46), wherein each of the well (46) has an open top and a closed bottom (being closed by the filter 40, 42) having at least one or more holes for a fluid/liquid to pass through, and a mechanical interlock formed by at least a portion of an inner wall of the well (46), and the at least a portion of the inner wall being tapered inwardly (i.e. forming a frustoconical shape) as it progresses from the top of the well toward the bottom of the well, as in figs. 3 – 4 and cols. 1 – 8 (claim 2). It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filtration device of Zermani as modified by DeSalvo, by adding the embodiment taught by Cohen et al., in order to provide an improved filtration device which has the ability to increase the rate of filling of the wells (col. 6, lines 21 – 22 of Cohen et al.), thereby increasing the rate of filtration of liquid therethrough. With regards to the degree of tapering of at least a portion of the inner wall, i.e. having a taper of from about 0 degrees toward a vertical center line of the well to about 20 degrees towards the vertical center line (claim 3), or the taper is about 7 degrees toward the vertical center line of the well (claim 4), it is considered a matter of choice of the

user, and the tapering being a result-effective variable, in which the values of from about 0 degrees toward a vertical center line of the well to about 20 degrees towards the vertical center line (claim 3), and/or about 7 degrees toward the vertical center line of the well (claim 4), are considered optimum values of the result-effective variable, which serve to increase/decrease the rate of flow through the well. If the user of the well desired the flow of liquid to be faster through the well, an increased/dramatic tapering (upto 20 degrees) toward the vertical center line should be the taper of the inner wall. However, if the user desired a much slower (but not stagnant) flow rate of liquid, then a taper of about 7 degrees might be sufficient.

Response to Arguments and Amendments

17. Applicant's arguments and amendments filed on 2-10-03 (Paper no. 7) with respect to claims 1 –6, 10 – 12, 16, 24 and 26 have been considered but are moot in view of the new grounds of rejection presented above. Applicant's amendments necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Allowable Subject Matter

19. Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. The following is a statement of reasons for the indication of allowable subject matter: the closest prior art include Zermani, DeSalvo and Cohen et al. mentioned above. None of these prior art and those searched, have disclosed or rendered obvious a filtration device having the limitation of the at least one piece of filter (in each well) being multiple pieces sequentially arranged in the well and sealed to the well by a skive formed between each layer (i.e. piece) of filter, as in claim 25.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 5,227,290 (Pocock), 6,309,305B1 and 6,514,463 B1 (both to Zermani), 4,704,255 (Jolley), 6,391,241 B1 (Cote et al.) and 4,642,220 (Björkman).

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne S. Ocampo whose telephone number is (703) 305-1039. The examiner can normally be reached on Mondays to Fridays from 8:00 A.M. to 4:30 P.M..


23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (703) 308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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24. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

M.S.O.

May 1, 2003


W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700